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# JOLIET JUNIOR COLLEGE BULLETIN

ADMISSION REQUIREMENTS  
AND  
COURSES OF STUDY



JOLIET, ILLINOIS  
January, 1927

## **ADMINISTRATIVE OFFICERS**

L. W. SMITH - - - - Superintendent and Principal  
C. E. SPICER - - - - Assistant Superintendent  
R. H. BUSH - - - - Assistant Superintendent  
I. D. YAGGY - - - - - Acting Dean

## **BOARD OF EDUCATION**

Dr. Marion K. Bowles, President  
Dr. R. L. Watson, Vice President  
Arthur Montzheimer  
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Clarence Sterling

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J. F. Skeel, Clerk of Board

## INTRODUCTION

The Board of Education of the Joliet Township High School maintains the Junior College as a distinct organization from that of the high school. But, as it is housed in the high school building, makes use of the libraries, gymnasiums, laboratories, and other facilities of the school, and has as instructors and officers, certain members of the high school corps, it necessarily preserves a close connection with the high school.

Junior college students have their own assembly and study hall, their own library, and in general their own recitation rooms, are permitted to come and go very much as they please between recitations, and are allowed greater freedom and privileges than are high school students. They are, nevertheless, expected to conform to general regulations of the high school regarding permits and other prescribed rulings.

Experience has shown certain very definite benefits derived from the work of the Junior College in any community where it is in existence. The student is not obliged to break his home and community connections until a later period. He is able to secure all the benefits of college life in the way of college companionships and participation in the college spirit, first in the familiar surroundings of his environment, later in a separate organization of a distant institution. The expense of a college education is very materially reduced and this becomes an important factor in case the student add to his college course a post graduate professional training. On the educational side the Junior College student has an opportunity for individual attention from the instructors due to the smaller classes in vogue, and his previous acquaintance with the college instructor.

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## FACULTY PREPARATION

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Teachers in the Junior College work in departments other than Manual Arts, are required to have the Bachelor's Degree and in addition to this, at least a year of graduate study in the subject of their department in a university of recognized standing. Teachers of academic subjects employed consequent to June, 1918, are not permitted to give instruction in the Junior College classes unless they hold a Master's or Doctor's Degree from an institution of the standing of those recognized by the North Central Association of Colleges and Secondary Schools. The teaching schedule of an instructor doing Junior College work is limited to a maximum of twenty recitation periods per week.

## REGISTRATION

The fall semester of the Junior College will open on the Tuesday following Labor Day. Registration for the second semester will take place shortly after the holidays.

A fee of one dollar will be charged for registration after the second day of the semester. No student will be admitted to any department of the Junior College for work for which he is to receive credit after the expiration of the third week of the semester except in extraordinary cases, when the Superintendent may admit him, subject to condition in the work which he has missed.

Registration will be considered tentative until (a) all fees have been paid (b) high school credits have been received and approved (c) a psychological test has been taken.

## SCHOLARSHIP REPORTS

On the sixth and twelfth Friday of each semester instructors will report, on cards provided for that purpose, to the dean upon the work of all students whose work is 80 or below.

**Probation**—Any student enrolled in Junior College who is reported as failing to make a passing grade in a minimum of eleven hours is placed on probation for the next semester; and if during the semester for which he is on probation he fails to pass the required minimum of eleven hours he is dropped from the college. A student who is registered for less than eleven hours must carry all the hours for which he is registered; otherwise he is put on probation.

**Dropped from College**—A Student who fails to carry at least six hours of the work for which he was registered will be dropped from the college.

Any student who has been dropped from college because of a deficiency in scholarship may enroll in high school, and after he has completed the work of a semester, may, by action of the dean be re-admitted for full college work.

## THE COLLEGE LOAN FUND AND SCHOLARSHIPS

**The College Loan Fund.** A fund was established several years ago to be loaned to graduates of the Joliet Junior College to be used in continuing their training at some institution of higher education. The fund is held in trust and administered by a College Loan Fund Board, consisting of four faculty members and the Superintendent. Students of character and promise are allowed to borrow from the fund upon making written application and complying with regulations made for the purpose of protecting

the fund. No interest is charged while the student is in school, but an interest of 5% begins from the time the student leaves school. No student is allowed to borrow more than \$500. any one year nor a total of more than \$1000. The policy of the Loan Fund Board is to keep the the fund working to the limit all the time. The fund was created and has grown from personal gifts, from the proceeds of certain Junior College activities, like the College plays, the second-hand book store, and interest on the fund itself.

**The Bertha E. Denning Memorial Fund.** A fund, in memory of Miss Bertha E. Denning, former Dean of Girls, is available to be loaned to members of the Joliet Junior College who need emergency help while pursuing their work in the Joliet Junior College. This fund is held in trust and administered by the same group that controls the College Loan Fund.

**The Bertha E. Denning Loan Fund.** The Business and Professional Women's Club of Joliet has this year created a fund to loan to young women members of the Joliet Junior College who need financial assistance. The two previous years this club has made a money gift to some young woman attending the Junior College.

**The Joliet Township High School Board Scholarships.** The Joliet Township High School Board offers each year to one boy and one girl, graduates of the Joliet Township High School and non-residents of the Township, scholarships entitling the holders to tuition in the Joliet Junior College for two years. These scholarships are prize scholarships and are awarded only to honor roll students. Their purpose is to promote high standards of scholarship among the non-resident students of the High School.

**Other Scholarships.** At present four graduates of the High School or Junior College are enjoying scholarships donated by generous and public spirited citizens of Joliet. One young man at the University of Illinois is the recipient of a gift, made by Frederick W. Woodruff, of \$400 a year for four years. A young woman at the University of Chicago has received a scholarship, the gift of Dr. Grant Houston, covering the cost of tuition for two years. Another young man has been assigned a scholarship, donated by the Rotary Club of Joliet, amounting to \$450. The Rotary Women also have, for two successive years, made an annual gift of \$150 to a young woman member of the Junior College.

**Robert M. Adam Award.** This award will be given during commencement week to the girl and the boy in each class who has made the highest semester hour average for the year. Students must take 12 or more semester hours of work exclusive of physical training each semester to be eligible. Students must have not less than

28 and not more than 60 hours of work exclusive of physical training to be classed as second year students.

### SOCIAL ACTIVITIES

The Junior College Faculty is anxious to foster all creditable activities for training students to meet successfully their associates after school years are over. Leadership in business and civic life begins in the school organization on the athletic field or in the social affair. There are opportunities for all in organizations emphasizing athletic, musical, literary and dramatic interests. The Faculty urges every student to take an active part in at least one of these major interests besides joining in the affairs of purely social nature which include the afternoon social hour and informal evening parties.

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### TUITION

Tuition is free to students who are residents of the Township of Joliet. Non-resident students who enroll for nine or more semester hours of work are required to pay a tuition fee of \$100.00 per semester in advance.

Non-resident students who enroll for less than nine semester hours are required to pay tuition at the rate of \$12.00 per semester hour.

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### LATE REGISTRATION FEE

Students who register after the second day of the semester must pay a late registration fee of \$1.00—Students entering after the first week must pay for tutoring in the work missed at the rate of seventy-five cents per class assignment.

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### LABORATORY FEES AND DEPOSITS

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The fees and deposits required for the laboratory courses in science in general are somewhat lower than those charged by most colleges and state universities.

Laboratory deposits are to cover breakage of apparatus. That amount not used to cover breakage will be returned at the end of the semester or when the pupil leaves college. When breakage or loss occurs which cannot be traced to some individual or group, it is to be assessed against the students using the laboratory at the time of the loss. Laboratory fees are to cover materials used and are not returnable.

Fees and deposits are payable at the time of enrollment each semester as follows:

Subject	Deposits	Fees
Chemistry 1 .....	\$3.00	\$4.00
Chemistry 2 .....	3.00	4.00
Chemistry 3 .....	3.00	4.00
Chemistry 4 .....	3.00	4.00
Chemistry 5 .....	3.00	4.00
Physics 1 .....	2.00	2.50
Physics 2 .....	2.00	2.50
Botany .....	2.00	2.50
Zoology 1 .....	2.00	4.00
Zoology 2 .....	2.00	4.00
General Engineering Drawing.....	1.00	1.00
Descriptive Geometry .....	1.00	1.00
Forge and Pattern Work.....	2.00	2.00
Machine Shop .....	2.00	2.00
Home Economics .....	1.50	1.50
Astronomy .....	2.00	2.00
Geology 1 .....	2.00	2.00
Geology 2 .....	1.50	1.50

#### DISMISSAL FROM COLLEGE

Any student leaving Junior College at any time after registration must return all locker keys, library books or other school property and must be formally dismissed from the institution. Students failing to be dismissed will not be recommended to other colleges.

## JUNIOR COLLEGE CURRICULUMS

The courses of study outlined in this re-issue of the Junior College catalog have been revised and extended to include the following general curriculums: literature and arts, engineering, pre-medical, pre-legal, teachers-training, and pre-commerce.

The pre-commerce curriculum represents an extension of the course of study and is offered in response to an increasing demand for that type of training. It is the specific purpose of this curriculum to give students a knowledge of the general principles underlying business and to lay the foundation for the more advanced and specialized curriculums offered by colleges of commerce and business administration. To this end the curriculum has been made to include in its requirements such subjects as money and banking, principles of economics and advanced accounting and auditing. These subjects are the major pre-requisites for specialized curriculums in banking, insurance, accountancy, industrial administration and transportation.

This brief description of the pre-commerce curriculum is illustrative of the guiding principle followed in the re-organization of the other curriculums. They are all basic substantial courses designed to give general training in their respective fields of education and at the same time prepare specifically for the advanced professional and technical curriculums. The six general curriculums listed above prepare definitely for a multiplicity of differentiated courses. Among these in addition to those named in the preceding paragraph are some ten or twelve curriculums in engineering, a variety of courses in the fields of medicine and law, advanced courses in education and numerous specialized curriculums based on a literature and arts foundation. Such courses are offered by the recognized universities and a large number of technical and professional higher institutions of learning.

The Junior College curriculums are advisedly outlined with special regard for the entrance requirements of the University of Illinois but are intended to give the broad substantial foundation required to do successful work of a specialized nature in any higher institution.

### REQUIREMENTS FOR ADMISSION

Admission to the Junior College is secured on the same basis as that required by the North Central Association of Colleges and Secondary Schools.

A candidate for admission must be at least 16 years of age.

Fifteen units of high school or other secondary school work, in acceptable subjects (See Lists A, B, C, below) must be offered by every candidate.

A unit is the amount of work represented by the pursuit of one preparatory subject, with the equivalent of five forty minute recitations a week for 36 weeks or the equivalent in laboratory or other practice.

Note:--Admission requirements and prescribed subjects are practically the same as those of the University of Illinois.

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### DEFICIENCIES

#### NO QUANTITATIVE CONDITIONS ARE PERMITTED.

In other words, every student must offer at the time of admission 15 units in acceptable subjects. These must include the 5 units prescribed in List A. It is provided, however, that a student who offers 15 acceptable units including the 5 units of List A, but is deficient not to exceed 2 units in subjects prescribed only for the curriculum which he wishes to take may be admitted in that curriculum to courses for which he is fully prepared, subject to the requirements that the deficiencies in question may be removed before he may register for a second year's work.

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### PREScribed SUBJECTS

The 15 units offered for admission must include:

- I. Subjects prescribed in List A, 5 units.
- II. Certain subjects prescribed in addition to List A for the curriculum which the student wishes to pursue.
- III. Enough electives from List B to make those offered in I and II, a total of 11 units.
- IV. From either List B or List C, 4 units.

## LIST A

	Units
English .....	3
Algebra .....	1
Plane Geometry .....	1
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Total .....	<b>5</b>

## LIST B

	Units
Latin .....	1-4
French .....	1-4
German .....	1-4
Spanish .....	1-4
English (4th unit) .....	1
Advanced Algebra .....	$\frac{1}{2}$ -1
Solid Geometry .....	$\frac{1}{2}$
Trigonometry .....	$\frac{1}{2}$
History .....	
Greek .....	1
Mediaeval and Modern .....	1
English History .....	$\frac{1}{2}$ -1
American History .....	$\frac{1}{2}$ -1
476 G. 4 ...	
Civics .....	$\frac{1}{2}$ -1
Economics and Economic History .....	$\frac{1}{2}$ -1
Commercial Geography .....	$\frac{1}{2}$ -1
Physiography .....	$\frac{1}{2}$ -1
Physiology .....	$\frac{1}{2}$ -1
Botany .....	$\frac{1}{2}$ -1
Zoology .....	$\frac{1}{2}$ -1
Physics .....	1-2
Chemistry .....	1-2

## LIST C

	Units
Agriculture .....	1-3
Bookkeeping .....	1
Business Law .....	$\frac{1}{2}$
Commercial Arithmetic .....	1
Drawing—Art and Design .....	$\frac{1}{2}$ -1
Drawing—Mechanical .....	$\frac{1}{2}$ -1
Household Economics .....	1-2
Manual Training .....	1-2
Music .....	1-2
Shorthand and Typewriting .....	1-2
Astronomy .....	$\frac{1}{2}$
Geology .....	$\frac{1}{2}$ -1
General Science .....	$\frac{1}{2}$ -1
Typewriting (double periods) .....	1

### SUMMARY

### ENTRANCE REQUIREMENTS FOR CURRICULUMS OFFERED BY THE JUNIOR COLLEGE

#### SCIENCE AND LITERATURE AND ARTS CURRICULUMS

	Units
I. List A .....	5
II. Latin, French, German, or Spanish .....	2
(both units in same language)	
III. Electives from List B .....	4
IV. Electives from list B or C .....	4

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Total .....	15
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#### ENGINEERING CURRICULUMS

	Units
I. List A .....	5
II. Advanced Algebra .....	$\frac{1}{2}$
Solid Geometry .....	$\frac{1}{2}$
III. Electives from List B .....	5
IV. Electives from List B or C .....	4

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Total .....	15
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## PRE-MEDICAL CURRICULUM

	Units
I. List A .....	5
II. Latin, French, German, or Spanish .....	2
(both units in same language)	
American History and Civics .....	1
III. Electives from List B .....	3
IV. Electives from List B or C .....	4
 Total .....	 15

## CURRICULUM FOR TEACHERS

	Units
I. List A .....	5
II. Electives from List B .....	6
III. Electives from List B or C .....	4
 Total .....	 15

## PRE-LEGAL CURRICULUM

	Units
I. List A .....	5
II. Two units in the same language .....	2
III. Electives from List B .....	4
IV. Electives from List B or C .....	4
 Total .....	 15

## CHEMISTRY AND CHEMICAL ENGINEERING CURRICULUMS

	Units
I. List A .....	5
II. Two units of French or German .....	2
Advanced Algebra .....	½
Chemistry .....	1
III. Electives from List B .....	2½
IV. Electives from List B or C .....	4
 Total .....	 15

**PRE-COMMERCE, GENERAL BUSINESS AND  
INDUSTRIAL ADMINISTRATION CURRICULUMS**  
**Units**

I.	List A .....	5
*II.	Advanced Algebra and Solid Geometry.....	1
III.	Electives from List B .....	5 or 6
IV.	Electives from List B or C .....	4
	Total .....	15

\*Required only for Industrial Administration Curriculum

**GRADUATION REQUIREMENTS**

The Joliet Junior College Diploma will be awarded to students completing one of the two-year curriculums outlined below. Deviation, however, from these curriculums will be permitted by the dean only in cases of necessity. In such cases 62 semester hours of college work is required, 476 G. 5

and it must include:

Rhetoric .....	6 hours
Language .....	8 "
History .....	6 "
Physical Science .....	8 "
Biological Science .....	4 "
Mathematics .....	5 "
Physical Training .....	2 "
Approved electives .....	23 "
Total for graduation .....	62 hours

**PRE-COMMERCE AND GENERAL BUSINESS  
CURRICULUM**

**FIRST YEAR**

First Semester	Second Semester	
Hrs.	Hrs.	
Eng. 1—Rhet. and Themes 3	Eng. 2—Rhet. and Themes 3	
Chemistry .....	Chemistry .....	4
Acc'y 1—Prin. of Acc't.. 3	Acc'y 2—Prin. Acc't ..	3
Math. 0 or 3—Alg...2 or 3	Math. 2 or 3—Trig. or	
Physical Training .....	Alg. .....	2 or 3
Elective .....	Physical Training .....	1
	Elective .....	3

## SECOND YEAR

First Semester	Second Semester
Hrs.	Hrs.
Econ. 3—Prin. of Econ.	Econ. 5—Money and Bank-
Acc'y 3—Accountancy .. 3	ing ..... 3
Pol. Sci. 1—Amer. Gov't 3	Acc'y 4—Accountancy .. 3
Approved Electives	Pol. Sci. 2—State and
History, Language, Literature, Science	Local Gov't ..... 3
	Approved Electives
	History, Language, Literature, Science

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## LITERATURE AND ARTS CURRICULUM

### FIRST YEAR

First Semester	Second Semester
Hrs.	Hrs.
Eng. 1—Rhet. and Themes 3	Eng. 2—Rhet. and Themes 3
**Language ..... 4	Language ..... 4
Hist. 2—Eng. Hist.....3	Hist. 2—Eng. Hist .... 3
Chemistry ..... 4	Chemistry ..... 4
or	or
Math. 0 or 2—Alg. or	Math. 3—Alg. ..... 3
Trig. ..... 2	Physical Training ..... 1
Physical Training ..... 1	

### SECOND YEAR

First Semester	Second Semester
Hrs.	Hrs.
Eng. 5—Eng. Lit ..... 3	Eng. 5—Eng. Lit. ..... 3
Language ..... 4	Language ..... 4
Approved Electives	Approved Electives
Pol. Sci., Econ., Science and Psychology	Pol. Sci., Money and Bank- ing and Science

\*\* See foot-note on page 23.

## CURRICULUM IN INSURANCE

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### FIRST YEAR

First Semester	Hrs.	Second Semester	Hrs.
Acc'y 1—Prin. of Acc't.	3	Acc't 2—Prin. of Acc't.	3
Hist. 1—English Hist.	3	Hist. 2—English Hist.	3
Math. 3—College Alg.	3	Math. 4—Analytic Geom.	5
Math. 2—Trigonometry	2	Eng. 2—Rhet. and Themes	3
Eng. 1—Rhet. and Themes	3	Physical Training .....	1
Physical Training .....	1	Electives	
Electives			

### SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Acc'y 3—Advanced Acc't and Auditing .....	3	Acc'y 4—Advanced Acc't and Auditing .....	3
Econ. 3—Prin. of Econ.	5	Econ. 5—Money and	
Math. 5—Differential Calculus .....	5	Banking .....	3
Pol. Science 1 .....	3	Math. 6—Int. Calc.	3
		Pol. Science 2 .....	3
		Approved Electives	

## PRE-MEDICAL CURRICULUM

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### FIRST YEAR

First Semester	Hrs.	Second Semester	Hrs.
Eng. 1—Rhet. and Themes	3	Eng. 2—Rhet. or Themes	3
Chem. 3—Inog. and Qual.	4	Chem. 4—Qual. Analysis	4
Zoology 1—Gen. Zoology	4	Zoology 2—Comparative	
Math 0 or 3—Alg.	2-3	Anatomy .....	5
Physical Training .....	1	Algebra .....	2-3
Approved Electives		Physical Training .....	1
History, Language or Geology		Approved Electives	
		History, Language or	
		Astronomy	

## SECOND YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Physics 1—Mechanics and Heat .....	5	Physics 2—Electricity Sound and Light ....	4
Chem. 5—Quan. Anal. ...	5	Chem. 6—Organic .....	5
Approved Electives		or	
		Botany 1—Gen. Botany..	4
		Approved Electives	

If language is not taken the first year it must be taken the second.

## PRE-LEGAL CURRICULUM

### FIRST YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Eng. 1—Rhet. and Themes	3	Eng. 2—Rhet. and Themes	3
**Language .....	4	Language .....	4
Hist. 2—English History	3	Hist. 2—English History	3
Math. 0 or 3—Algebra 2-3		Math 2 or 3—Trig. or	
Acc'y 1—Prin. of Acc'y..	3	Algebra .....	2-3
Physical Training .....	1	Acc'y 2—Prin. of Acc'y..	3
		Physical Training.....	1

### SECOND YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Econ. 3—Prin. Econ. ....	5	Econ. 5—Money and Banking .....	3
Pol. Sci. 1—Amer. Gov't	3	Pol. Sci. 2—State and Local Government ...	3
Approved Electives		Approved Electives	
Science, Acc'y, Literature, Language.		Science, Acc'y, Literature, Language.	

\*\* See foot-note on page 23.

# CURRICULUM IN INDUSTRIAL ADMINISTRATION

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## FIRST YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Acc'y 1—Prin. of Acc't	3	Acc'y 2—Prin. of Acc't	3
G. E. D. 1— Elements of		G. E. D. 2—Descriptive	
Drafting .....	4	Geometry .....	4
Math. 3—College Alg .....	3	Math. 4—Analytic Geom.	5
Math. 2—Trigonometry .	2	Eng. 2—Rhet. and Themes	3
Eng. 1—Rhet. and Themes	3	Physical Training .....	1
Physical Training .....	1		

## SECOND YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Econ. 3—Prin. of Econ.	5	Econ. 5—Money and	
Math. 5—Differential		Banking .....	3
Calculus .....	5	Math. 6—Integ. Calculus	3
Physics 1—Mechanics and		Physics 2—Electricity	
Heat .....	5	Sound and Light ....	4
Approved Electives		Mechanics 1—Analy.	
		Mech. .....	3
		Approved Electives	

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## TEACHER'S CURRICULUM FIRST YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Eng. 1—Rhet. and Themes	3	Eng. 2—Rhet. and Themes	3
Hist. 1—English Hist .....	3	Hist. 2—English Hist. .	3
Chem. 1 or 3 .....	4	Chem. 2 or 4 .....	4
or		or	
Math. 0 or 3 Algebra 2-3		Math. 3 or 2 Algebra..	3-2
Pub. School Music .....	2	Art .....	2
Educ. 1 .....	3	Edu. 3 .....	3
Physical Training .....	1	Physical Training .....	1
Approved Electives		Approved Electives	
Language or Geology		Language or Astronomy	

## SECOND YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Teaching A. M. ....	6	Teaching A. M. ....	6
or		or	
Zoology 1 .....	4	Botany 1 .....	5
Psychology.....	3	Education 4 .....	3
Approved Electives		Approved Electives	
Pol. Sci. 1, Language, Eng. Lit., Geology.		Pol. Sci. 2, Language, Eng. Lit., Astronomy.	

This curriculum is so arranged that practice teaching may be taken either the first or second semester of the second year. Practice teaching is required of all who desire to obtain a certificate to teach without examination at the time they graduate from Junior College. This work is not accredited by the University of Illinois but is given to satisfy the certificating requirements of the State Board. Six semester hours credit is given toward graduation from Junior College for practice teaching when taken five half days per week for eighteen weeks. This course meets the requirements for first grade certificates.

## CURRICULUM IN CHEMISTRY AND CHEMICAL ENGINEERING

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### FIRST YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Chem. 3—Inorganic and Qual. ....	4	Chem. 4—Qual. Anal....	4
Math. 3—College Alg. ...	3	Math. 4—Analytical	
Math. 2—Plane Trig. ...	2	Geom. ....	5
**Lang.—Ger.or French. 4		Lang.—Ger. or French....	4
Eng. 1 Rhet. 1 and Themes 3		Eng. 2—Rhet. and Themes 3 Physical Training .....	1
Physical Training .....	1		

\*\* See foot-note on page 23.

## SECOND YEAR

First Semester	Second Semester
Hrs.	Hrs.
Chem. 5—Quan. Anal. . . 5	Chem. 6—Organic Chem 5
Math. 5—Diff. Calculus.. 5	Math. 6—Integ. Calculus 3
Physics 1—Mech. and Heat 5	Physics 2—Electricity,
Approved Electives.....	Sound and Light ..... 4
Eng. Lit. or Geology	Mech. 1—Analy. Mech. . . 3
	Approved Electives
	Eng. Lit. or Astronomy

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## CURRICULUM IN ELECTRICAL ENGINEERING

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### FIRST YEAR

First Semester	Second Semester
Hrs.	Hrs.
Chem. 3—Inorg. and Qual. 4	Chem. 4—Qual. Anal. . .4
G. E. D. 1—Elements of	G. E. D. 2—Des. Geom... 4
Drafting ..... 4	Math. 4—Analy. Geom... 5
Math. 3—Algebra ..... 3	Eng. 2—Rhet.and Themes 3
Math. 2—Trig. ..... 2	Physical Training ..... 1
Eng. 1—Rhet. and Themes 3	
Physical Training ..... 1	

### SECOND YEAR

First Semester	Second Semester
Hrs.	Hrs.
*Language ..... 4	Language ..... 4
Math. 5—Diff. Calculus.. 5	Math. 6—Integ. Calculus.3
M. A. 1-2—Forge and Pat- tern work ..... 3	M. A. 3—Machine Shop...3
Phys. 1—Mech. and Heat 5	Phys. 2—Electricity, Sound and Light ..... 4
	Mech. 1—Analy. Mech.. 3

\* See foot-note on page 23.

**CURRICULUM IN RAILWAY ELECTRICAL  
ENGINEERING  
AND  
RAILWAY MECHANICAL ENGINEERING**

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**FIRST YEAR**

First Semester	Second Semester	
		Hrs.
Chem. 3—Inorg. and Qual. 4	Chem. 4—Qual. Anal. ... 4	
G. E. D. 1—Elements of	G. E. D. 2—Des. Geom. ... 4	
Drafting ..... 4	Math. 4—Analy. Geom. ... 5	
Math. 3—College Alg. ... 3	Eng. 2—Rhet. and Themes 3	
Math. 2—Plane Trig. ... 2	Physical Training ..... 1	
Eng. 1—Rhet. and Themes 3		
Physical Training ..... 1		

**SECOND YEAR**

First Semester	Second Semester	
		Hrs.
*Language .....	Language .....	4
Math. 5—Diff. Calculus..5	Math. 6—Integ. Calculus 3	
Phys. 1—Mech. and Heat 5	Physics 2—Electricity,	
M. A. 1-2—Forge and	Sound and Light .... 4	
Pattern Work ..... 3	Mech. 1—Analy. Mech.. 3	
	M. A. 3—Machine Shop. 3	

**CURRICULUM IN RAILWAY CIVIL ENGINEERING**

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**FIRST YEAR**

First Semester	Second Semester	
		Hrs.
Chem. 3—Inorg. and Qual. 4	Chem. 4—Qual. Anal. ....4	
G. E. D. 1—Elements of	G. E. D. 2—Des. Geom....4	
Drafting ..... 4	Math. 4—Analy. Geom. ... 5	
Math. 3—College Alg. ... 3	Eng. 2—Rhet. and Themes 3	
Math. 2—Trig. ..... 2	Physical Training ..... 1	
Eng. 1—Rhet. and Themes 3		
Physical Training ..... 1		

\* See foot-note on page 23.

## SECOND YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Surv. 1—Surveying .....	3	Surv. 2—Topographic Surveying .....	3
*Language .....	4	Language .....	4
Math. 5—Diff. Calculus ..	5	Math. 5—Integ. Calculus ..	3
Phys. 1—Mech. and Heat ..	5	Phys. 2—Electricity, Sound and Light .....	4
		Mech. 1—Analy. Mech. ..	3

## CURRICULUM IN GENERAL ENGINEERING PHYSICS

### FIRST YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
Chem. 3—Inorganic and Qual. .....	4	Chem. 4—Qual. Anal. ..	4
G. E. D. 1—Elements of Drafting .....	4	G. E. D. 2—Des. Geom. ..	4
Math. 3—Col. Algebra ..	3	Eng. 2—Rhet. and Themes ..	3
Math. 2—Trigonometry ..	2	Math. 4—Analy. Geom. ..	5
Eng. 1—Rhet. and Themes ..		Physical Training .....	1
Physical Training .....	1		

### SECOND YEAR

First Semester		Second Semester	
	Hrs.		Hrs.
**Lang.—German or French .....	4	Lang.—German or French ..	4
Math. 5—Diff. Calculus ..	5	Math. 6—Integ. Calculus ..	3
Chem. 5—Elementary Quan. Analysis .....	5	Phys. 2—Electricity, Sound and Light .....	4
Phys. 1—Mech. and Heat ..	5	Mech. 1—Analy. Mech. ..	3
		Electives .....	

\* See foot-note on page 23.

## CURRICULUM IN MUNICIPAL AND SANITARY ENGINEERING

## FIRST YEAR

First Semester	Second Semester	
Hrs.	Hrs.	
Chem. 3—Inorg. and Qual. 4	Chem. 4—Qual. Anal. ... 4	
G. E. D. 1—Elements of	G. E. D. 2—Des. Geom. ... 4	
Drafting ..... 4	Math. 4—Analy. Geom. ... 5	
Math. 2—Trigonometry... 2	Eng. 2—Rhet. and Themes 3	
Math. 3—College Alg. ... 3	Physical Training ..... 1	
Eng. 1—Rhet. and Themes 3		
Physical Training ..... 1		

SECOND YEAR

First Semester	Second Semester	
Hrs.	Hrs.	
Surv. 1—Plane Surveying 3	Surv. 2—Higher Surv. . . 3	
*Language .....	Language .....	4
Math. 5—Diff. Calculus.. 5	Math. 6—Integral Calcul-	
Phys. 1—Mech. and Heat 5	lus .....	3
	Physics 2—Electricity	
	Sound and Light .....	4
	Mech. 1—Analy. Mech. . . 3	

\* See foot-note on page 23.

## **CURRICULUM IN CIVIL ENGINEERING**

## FIRST YEAR

First Semester	Second Semester
Hrs.	Hrs.
Chem. 3—Inorg. and Qual. 4	Chem. 4—Qual. Anal. .... 4
G. E. D. 1—Elements of	G. E. D. Des. Geom. .... 4
Drafting ..... 4	Math. 4—Analy. Geom. ... 5
Math. 3—College Alg. ... 3	Eng. 2—Rhet. and Themes 3
Math. 2—Trigonometry.. 2	Physical Training ..... 1
Eng. 1—Rhet. and Themes 3	
Physical Training ..... 1	

## SECOND YEAR

### First Semester

### Second Semester

Hrs.

Hrs.

Surv. 1—Plane Surv. ....	3	Surv. 2—Higher Surv. ...	3
Math. 5—Diff. Calculus. .	5	Language .....	4
* Language ..... *	4	Math. 6—Integ. Calculus. 3	

Phys. 1—Mech. and Heat 5

Phys. 2—Electricity,	
Sound and Light ....	4
Mech. 1—Analy. Mech. ...	3

## CURRICULUM IN MECHANICAL ENGINEERING

### FIRST YEAR

#### First Semester

#### Second Semester

Hrs.

Hrs.

Chem. 3—Inorganic and Qual. ....	4	Chem. 4—Qual. Anal. ....	4
G. E. D. 1—Elements of Drafting .....	4	G. E. D. 2—Des. Geom. ...	4
Math. 3—College Alg. ...	3	Math. 4—Analy. Geom. ...	5
Math. 2—Trigonometry. .	2	Eng. 2—Rhet. and Themes	3
Eng. 1—Rhet. and Themes	3	Physical Training .....	1
Physical Training .....	1		

### SECOND YEAR

#### First Semester

#### Second Semester

Hrs.

Hrs.

* Language .....	4	Language .....	4
Math. 5—Diff. Calculus. .	5	Math. 6—Integ. Calculus. 3	
M. A. 1-2—Forge and Pattern Work .....	3	M. A. 3—Machine Shop ..	3
Phys. 1—Mech. and Heat. 5		Phys. 2—Electricity,	

Sound and Light .....	4
Mech. 1—Analy. Mech. .	3

\* Engineering students who have had two years French or German in high school may substitute second year college subjects for the language requirements in Junior College in all courses except General Engineering Physics, Chemical Engineering and the Curriculum in Chemistry.

\*\* In all cases where language is taken students are expected to begin a language in College rather than continue with the language they have had in high school.

## DESCRIPTION OF COURSES

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### MATHEMATICS

**Math. 0-1. Algebra**—A five hour course in algebra designed for Junior College students who have had only one year of high school algebra. It covers the advanced part of high school algebra as well as the work in College algebra. Two hours first semester and three hours second semester.

Prerequisite: Entrance algebra 1 unit; plane geometry 1 unit.

Credit: 5 hours.

**Math. 2. Trigonometry**—The elements of plane trigonometry and their application, including logarithms.

Prerequisite: Entrance algebra  $1\frac{1}{2}$  units; plane geometry 1 unit.

Credit: 2 hours

**Math. 3. College Algebra**—Advanced algebraic operations with application to practical problems.

Prerequisite: Entrance algebra  $1\frac{1}{2}$  units; plane geometry 1 unit.

Credit: 3 hours.

**Math. 4 .Analytic Geometry**—The subject of plane Analytic Geometry is covered with a view to its practical application to engineering problems. Three weeks are devoted to solid Analytic geometry.

Prerequisite: Math. 2 and 3.

Credit: 5 hours.

**Math. 5 and 6. Calculus**—A year course. The principles of calculus are developed and applied to functions of one and of several variables.

Prerequisite: Math. 4.

Credit: 5 hours and 3 hours.

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### ENGINEERING

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**G. E. D. 1. Elements of Drafting**—Lettering, isometric oblique and perspective drawing, orthographic projection; machine sketching, working drawings; 12 plates from specification and 6 plates from models, with tracings, dimensioned sketches from parts of machine; trac-

ings duplicated in blue print; time sketches. For students who have had high school mechanical drawing, provision is made for advanced work.

Credit: 4 hours. One semester.

**G. E. D. 2. Descriptive Geometry**—Point, line and place; surface; intersections and developments. Problems and recitations. Three drawing room plates, 2 hours each, 4 problems per plate and 2 home plates, 5 problems each a week.

Prerequisite: Solid geometry; college algebra; trigonometry.

Credit: 4 hours. One semester.

**Mechanics. Theoretical and Applied**—The mechanics of engineering rather than that of astronomy and physics. Force systems; equilibrium; centroids and center of gravity; friction; kinematics; problems; statement of conditions and use of data.

Prerequisite: Math. 5; registration in math. 6.

Credit: 3 hours. One semester.

**Surveying 1. Plane Surveying**—The theory use and adjustment of the compass, transit and level; the computation of areas and volumes; map construction, the United States land survey methods, re-establishment of corners and boundaries and interpretation of deeds; farm and city surveying; elements of topographic surveying. Problems with the tape, compass, transit and level.

Prerequisite: G. E. D. 1 and 2; Math. 2.

Credit: 3 hours. One semester.

**Surveying. Higher Surveying**—The theory and use of the transit and plane-table in making topographic surveys; methods; topographic surveying.

Prerequisite: Surveying 1; Physics 1 and registration in physics 2.

Credit: 3 hours. One semester.

**Slide Rule**—Theory and use of the various types of slide-rule.

Prerequisite: Registration in Math. 2.

Credit: 1 hour. One semester.

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## MANUAL ARTS AND HOME ECONOMICS COURSES

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The completion of our new building permits us to  
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offer courses in Forge, Pattern Work, for second year engineering students and one year of work in Home Economics for girls who are taking courses in Home Economics or in Household Administration.

We are offering the following courses:

**Manual Arts 1**—Forge Shop practice and management.

Length of course: 9 weeks. Credit: 1 hour

**Manual Arts 2**—Pattern Shop practice and management.

Length of course: 9 weeks. Credit: 2 hours.

**Manual Arts 3**—Machine Shop practice and management.

Length of course: 1 semester. Credit 3 hours.

**Home Economics 1**—Art and Sanitation in Daily Life.

Length of course: 1 semester. Credit: 2 hours.

**Home Economics 2**—Selection and Preparation of Foods.

Prerequisite: High School Physics and Chemistry 1.

Length of course: 1 semester. Credit: 3 hours.

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### ENGLISH LANGUAGE AND LITERATURE

**English 1-2. Rhetoric and Themes**—Required of all freshmen. First Semester: A study of the elements, principles and qualities of English composition; themes upon careful study of selections from English prose and verse; versification and writing of simple verse; library reference work; about thirty short themes, and one long theme with outline and bibliography.

Second semester: A continuation of the work begun in the first semester; themes based on personal experience and personal opinion; emphasis on the forms of discourse, with extensive reading in each form; reports of reading due once a week; one long theme with outline and full bibliography.

Prerequisite: The minimum entrance requirements in English.

Credit: 6 hours. Meets M. W. F. both semesters.

**English 3-4. American Literature**—First semester: A study of American Literature as an interpreter of national ideals, including the Colonial, Revolutionary, Early National and New England Renaissance periods; recitations and lectures; extensive collateral reading; weekly written reports; term paper with bibliography.

Second semester: Continues the work of the first semester with a study of the periods of Transition and Lar-

ger Nationalism to 1914. Reports; term paper with bibliography.

Prerequisite: The minimum entrance requirements in English.

Credit: 4 hours. Meets Tu. Thur. both semesters.

**English 5-6. Survey of English Literature**—First semester: a study of English prose and poetry from Chaucer through Burns; recitations and lectures; extensive collateral reading; weekly written reports; term paper.

Second Semester: Continues the work of the first semester.

Second Semester: Continues the work of the first semester.  
Galley 12 476

mester, beginning with Wordsworth and continuing through Stevenson; collateral reading with weekly reports; term paper with bibliography.

Prerequisite: One year of college work.

Credit: 6 hours. Meets M. W. F. both semesters.

**English 7. Contemporary Literature**—Either semester. A study of contemporary drama, novel, and poetry to enable students to form intelligent judgments of individual authors and to discover and appraise for themselves the outstanding literary tendencies. Extensive reading, reports, and a criticism of some one author in addition to those studied in class will be required of each student. Emphasis will be on the literature since 1890.

Prerequisite: One year of college work.

Credit: 2 hours. Meets Tu. Thur. One semester.

**English 8. Introduction to Shakespeare**—Either semester. The plays studied each semester will be different so that a student may elect both semesters if he desires. Three plays are studied intensively each semester and other plays are assigned for reading. Among those studied in class are, Hamlet, Lear, The Tempest, Romeo and Juliet, Merchant of Venice, Macbeth, Othello, Winter's Tale, Twelfth Night.

Prerequisite: English 5-6, or one year of college work.

Credit: 2 hours. Meets Tu. Thu. One semester.

**English 9. Oral Expression. (Public Speaking)**—Required of all students. A study and interpretation of standard literature; staging of plays, debates, reports.

Prerequisite: Minimum college entrance requirements in English.

Credit: 2 hours. Either or both semesters.

**English 10. Business Writing**—Either semester. Correspondence; sales letters; practice writing business reports and summaries; lectures and discussions.

Prerequisite: English 1-2.

Credit: 2 hours. One semester.

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### ZOOLOGY

**Zoology 1. General Zoology**—This course is designed to teach the fundamental principles of each of the major divisions of zoology, giving the standard facts of structure, physiology, embryonic development, ecology, geographical distribution and paleontology, and those things necessary for the medical student's correlation as well as for those who desire a foundation for advance work in this branch of science.

Credit: 4 hours. One semester.

**Zoology 2. Comparative Anatomy of the Vertebrates**—This course is designed for medical students only. It will consist of lectures, collateral readings, and laboratory dissection. Two vertebrate forms will be dissected, comparing their anatomy with that of man.

Prerequisite: Zoology 1.

Credit 5 hours. One semester.

### BOTANY

**Botany 1. General Botany**—This course is planned to give a foundation of botany for advanced work, and will also be accepted as part credit for pre-medical students. A study will be made of the properties and activities of protoplasm, developmental history, evolution of structure and functions, relation to environment and classification from the lowest to the highest forms.

Credit: 5 hours. One semester.

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### GEOLOGY

**Geology 1.**—A study of Geological principles and processes, supplemented by laboratory work with the common rocks and rock forming minerals and with topographic and geologic maps.

Credit: 3 hours. First semester.

**Geology 2.**—Geological Processes supplemented by field exercises.

Prerequisite: Geology 1.

Credit: 2 hours. Second semester.

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#### FOREIGN LANGUAGE

**Language 1-2. Beginner's Course in French**—This course is offered for those who have had no French, or but one year of high school French. It consists of elementary grammar, pronunciation, reading of modern authors, composition and conversation. Semesters I and II.

Credit: 4 hours each semester.

**Language 3-4. French**—This course is offered for those who have had two years of high school French or French 1-2 in the Junior College. It consists of rapid reading of modern prose, poetry, and drama, with a brief history of literature in connection with the more prominent French authors. Conversation, composition, and a study of syntax are continued. Semesters I and II.

Credit: 4 hours each semester.

**Language 11-12 Elementry Course in German**—This course consists of elementary grammar, easy reading and composition based on reading. (Those having more than one year of high school German may not enter this class.)

Credit: 4 hours each semester.

**Language 13-14. Second Year German**—This course consists of selections from standard prose writers, sight reading and composition. At the option of the instructor works of general scientific character may be read in the second semester.

Prerequisite: Course 11-12 or two years of high school German.

Credit: 4 hours each semester.

#### PHYSICS

**Physics 1. Mechanics, Molecular Physics and Heat**—Lectures, class room demonstration, recitations, and written exercises. First semester: 3 days each week.

Laboratory experiments and quizzes on the above class work. First semester: 2 days each week.

Prerequisite: Math. 2, Math. 3, and high school physics.

Credit: 5 hours first semester.

**Physics 2. Electricity, Sound and Light**—A general course in electricity, sound and light. Lectures, class room demonstrations, recitations and written tests. Sec-

ond semester: 3 days each week.

Laboratory experiments and quizzes on above class work. Second semester: 2 days each week.

Prerequisite: Physics 1.

Credit: 4 hours second semester.

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## ASTRONOMY

**Descriptive Astronomy**—An elementary course of lectures and laboratory exercises dealing with the earth as an astronomical body, the solar system and recent investigations in stellar astronomy. Evening meetings are devoted to constellation study and telescopic observation.

Credit: 3 hours. One semester.

## CHEMISTRY

**Chemistry 1-2. General Inorganic Chemistry**—A thorough, fundamental course in the chemistry of metals and non-metals.

Lectures, recitations, and laboratory work. Semester I and II.

Credit: 4 hours each semester.

**Chemistry 3-4. Inorganic and Qualitative Analysis**—Ionization mass action, and theory of solution are fully discussed, and preliminary experiments with the metallic ions are performed before the analysis is undertaken. Semesters I and II.

Prerequisite: One year of high school chemistry or its equivalent.<sup>5</sup>

Credit: 5 hours each semester.

**Chemistry 5. Quantitive Analysis**—(a) Gravimetric Analysis: Determination of chlorine, sulphate, aluminum, calcium and magnesium.

(b) Volumetric Analysis: Acidimetry, alklimetry, iodimetry, and dichromate and permanganate methods. Numerous problems are solved.

Prerequisite: Qualitative Analysis.

Credit: 5 hours. One semester.

**Chemistry 6. Organic Chemistry**—The alipathic compounds and their derivations and some aromatic compounds are studied. General methods of formation and relations between compounds are emphasized. This course covers the work of the first semester of a comprehensive year course and meets the needs of pre-medical students.

**Prerequisite:** Qualitative Analysis.

**Credit:** 5 hours. One semester.

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## HISTORY

**History 1-2. English History**—This is a general course in English History from pre-historic times until the present. The stress is placed upon events important in the progress of the nation's development rather than upon conspicuous concurrences. "It is believed that a study of English History from a view point that is not too narrowly British cannot fail to give deeper insight into the development of American life and thought and civilization."

**Credit:** 6 hours. (No credit for one semester's work.)

**History 3-4. American History**—This is a general course in American History from the planting of the English colonies in America to the present. In the Colonial period the emphasis will be upon the economic and social phases; but from 1760 the main attention will be given to the political and constitutional development of the nation. The course is aimed to make clear from many different points of view, how America has grown out of the European background into a world power with ideals, institutions and possibilities of its own.

**Credit:** (No credit given for one semester's work.) 6 hours.

**History 5-6. 20th Century History**—This course begins with the downfall of Napoleon in March, of 1814. (Before the battle of Waterloo.)

The prerequisite for this course is Medieval and Modern History (1 year) or English History (1 year). In special cases, with the consent of the head of the History Department and Advisory Committee American History may be substituted for the above.

**Credit:** 4 hours (no credit for one semester's work.)

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## POLITICAL SCIENCE

**Political Science 1-2**—This is a course in the study of the American Government. The Local, State and National Governments, political parties, machinery of government, public opinion and the nature of democracy will be studied. A comparison of our government with various types of foreign governments will be included in the

course.

Credit: 6 hours. (No credit for one semester's work.)

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### ECONOMICS

**Economics 2. Economic History of the United States—** The development of the industrial and commercial activities in the U. S. from the beginning of Colonial settlement until the present time; a study of the methods of production that have been used and of the institutions that have been developed in the satisfaction of the needs of the people. In this study, attention is given to the interaction that is taking place between social and political institutions and physical environment.

Credit: 3 hours. One semester.

**Economics 3. Economics—** This is a general introductory course in which the principles underlying economic organization and activity are studied for the purpose of enabling the student to understand the operation of economic forces and to reach sound conclusions on economic problems.

Credit: 5 hours. One semester.

**Economics 5. Money and Banking—** The principles of money and credit; the functions and management of banks, savings banks, trust companies, farm loan banks, national banks and the federal reserve system of banks.

Prerequisite: Economics 3.

Credit: 3 hours. One semester.

### PSYCHOLOGY

**Psychology 1—** This is an elementary course dealing with the fundamental facts and laws of mental life. In the main it will be a lecture and class recitation course, although simple laboratory experiments will be performed.

Prerequisite: 1 year of college work.

Credit: 3 hours. One semester.

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### ACCOUNTANCY

**Accountancy I. Elementary Accounting—** This is an introductory course and is intended to give the student a knowledge of the various steps in the accounting process. Transactions are recorded in various books of original entry, postings are made to the ledger, trial balances are prepared, simple financial statements are compiled, and

the ledger is closed.

Credit: 3 hours. One semester.

**Accountancy II. Elementary Accounting (Continued)** Columnar books, controlling accounts, business papers, the voucher system, and elements of corporation accounting are studied. More detailed work on financial statements is given.

Credit: 3 hours. One semester.

**Accountancy III. Cost Accounting**—Principles of cost accounting applied to a manufacturing business conducted by a corporation.

Prerequisite: Accountancy 2.

Credit: 3 hours. One semester.

**Accountancy IV. Advanced Accounting**—Special financial statements, reading balance sheets, goodwill, depreciation, sinking funds and reserves.

Prerequisite: Accountancy 3.

Credit: 3 hours. One semester.

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## EDUCATION

**Education 1. Introduction to Education**—An elementary course designed to introduce students to the study of education by scientific methods. It is expected that this course will give the student an introductory survey of the field of education, which will serve as a basis for later study and experience. Assigned readings and class observations with reports will be required of all members of the class.

Credit: 3 hours. One semester.

**Education 2. Introduction to the Psychology of Elementary School Subjects**—A study of the methods by which the child learns to write, draw, read, spell, and grasp the meaning of history, geography, mathematics, and natural science, and of the mental processes which are developed in learning these subjects. Previous work in psychology is not necessary, although it is desirable. The aim of the course is to prepare the student to understand and apply intelligently methods of teaching.

Credit: 3 hours. One semester.

**Education 3. Educational Methods**—The aim of this course is to derive methods of instruction from examination of educational aims, materials, and psychological prin-

ciples. The order of development is as follows: Aim of education; materials of education; mental processes involved in learning; interest, incentive, and motive; forms of instruction:—induction and deduction; method and habit formation; method in the formation of worthy ideals and prejudices; review of organization of subject matter, and effective devices.

Prerequisite: Elementary Psychology.

Credits: 3 hours. One semester.

**Education 4. Educational Measurement**—This is an introductory course conducted on the laboratory plan. The elementary principles of measurement are considered and the several types of tests studied. Throughout the course emphasis is given to practice in the administering, scoring, tabulation and interpretation of test results.

Prerequisite: Education 1. or Elementary Psychology

Credit: 3 hours. One semester.

#### **PUBLIC SCHOOL MUSIC AND ART**

These courses are designed to meet the music and art situation as it is found in the elementary schools.

Students who are not enrolled in the teachers' course are not advised to take this work.

Credit: Public School Music 2 hours.

Credit: Public School Art 2 hours.



The essence of all true education is so to train, instruct, and discipline the youth that he may comprehend the environment, physical and spiritual, in which his lot is cast and be able to make his contribution, however slight, to its development and enrichment.

—Nicholas Murray Butler